EPS Micro Capsule Filters

Single Layer PES Membrane

EPS Micro Capsule filters are constructed with a single layer Polyethersulfone (PES) membrane. They are designed for the electronics industry and used for removing fine and ultrafine particles from aqueous liquids. Pore sizes range from 0.02 to 0.45 µm and the filter devices scale from laboratory to full production using identical materials to ensure consistent results.

These hydrophilic filters have low extractables for fast rinse-up to conductivity limits and fast rinse-down to TOC limits. EPS Micro Capsule filters deliver high flow and throughput with chemical compatibility across a wide pH range. They are commonly utilized in the final filtration of liquids for point of use tools.

EPS filters are pulse power flushed until the rinse effluent reaches 18+ Megohm-cm and less than 3ppb TOC. Each filter is individually tested to ensure integrity

Critical Process provides unrivaled delivery times, technical consulting before purchasing, and very competitively priced high-performance products. Our comprehensive testing & analysis and validation services support your team whenever they need it. Your process experts partnering with our filtration experts is how we deliver your company's solution right the first time.

Fine Particle Removal

Clarification & Prefiltration

MICRO CAPSULES – Nominal Dimensions
Body Length: 1.9 in. (4.8 cm)
Overall Length: 2.8 to 3.8 in. (7.1 to 9.7 cm)
Outside Diameter: 2.6 in. (6.6 cm)

EPS Micro Capsules are recommended for:

- UPDI Water
- Acids & Bases
- Etch Baths
- Solvents
- Bulk Chemicals

Maximum Operating Parameters

	MICRO CAPSULES
Liquid Operational Pressure	80 psi at 68 °F (5.52 bard at 20 °C)
Gases Operational Pressure	60 psi at 68 °F (4.14 bar at 20 °C)
Operating Temperature (water)	110 °F at 30 psid (43 °C at 2.07 bard)
Forward Differential Pressure	50 psid at 68 °F (3.45 bard at 20 °C)
Reverse Differential Pressure	40 psid at 68 °F (2.76 bard at 20 °C)
Recommended Changeout Pressure	35 psid (2.41 bard)

Sanitization & Sterilization

Autoclave	250 °F (121 °C), 30 min, 5+ cycles
Chemical Sanitization	Performed using industry standard concentrations of hydrogen peroxide, peracetic acid, sodium hypochlorite and other selected chemicals.

Integrity Testing

PORE SIZE	BUBBLE POINT MINIMUM*	
µm	PSIG	BARG
0.02	**	**
0.03	**	**
0.10	**	**
0.22	50	3.5
0.45	25	1.7

* For water wetted membrane
** Test pressure exceeds operational limits of Micro capsule filters.

Construction Materials

Filtration Media	PES membrane
Media Support	Polypropylene
End Caps, Center Core, Outer Support Cage, Micro Capsule Housing	Polypropylene
Sealing Method	Thermal Bonding

Filtration Area

Area	0.575 ft^2
	533 cm^2

Extractables

EPS Micro Capsule filters typically exhibit low levels of non-volatile residues and conform with USP <661>/<665>.

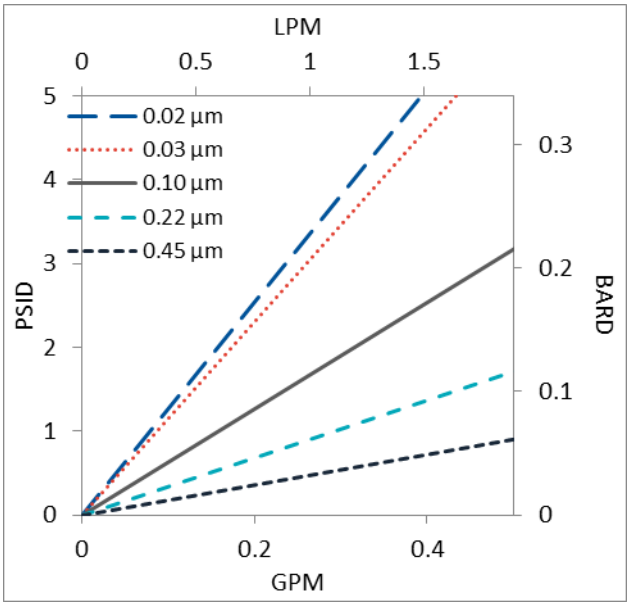
TOC and Conductivity

EPS Micro Capsule filter water effluent conforms with the TOC and water conductivity standards of SEMI Standard F104 (modified) and F63 after an appropriate flush with ultrapure water.

Non-Fiber Releasing

The EPS Micro Capsule filters comply with Title 21 CFR sections 211.72 and 210.3 (b)(6), for non-fiber releasing filters.

Flow Rates for EPS Micro Capsules by Pore Size



Flow rates for Micro Capsule filters are per filter. The test fluid is water at ambient temperature. Flows are tested using a Micro capsule filter with ½" Sanitary inlet and outlet ports. Rates will vary based on end configuration of the Micro capsule.

EPS Micro Capsule Filters Ordering Information

All Critical Process filters are configurable to meet customer specifications.
Fill in the corresponding codes in the boxes below to build your Part Number.

To consult with one of our technical team members, request a quote or place an order:
call (603) 880-4420 or contact us here.

Micro Capsule Filters

MIC EPS [ ] N 000 [ ] [ ] [ ] [ ] – [ ]

Pore Size Code
-02 = 0.02 µm
-03 = 0.03 µm
-10 = 0.10 µm
-20 = 0.22 µm
-40 = 0.45 µm

Inlet
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
4 = Luer Lock
5 = 1/2" Sanitary*
6 = 1/4" MNPT

Inlet Vent Port
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
4 = Luer Lock
6 = 1/4" MNPT
7 = Side Bleed Valve

Outlet
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
3B = 1/2" Hose Barb with Filling Bell
4 = Luer Lock
5 = 1/2" Sanitary*
6 = 1/4" MNPT

Outlet Vent Port
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
4 = Luer Lock
6 = 1/4" MNPT
7 = Side Bleed Valve

Side Vent O-Ring**
B = Buna
E = EP
S = Silicone
V = Viton (or FKM)
K = FFKM

*When choosing the Sanitary Inlet/Outlet, the Luer Lock or bleed valve option is required for the Vent Port
** O-Ring is only available on Bleed Valve

CRITICAL PROCESS FILTRATION, INC.

One Chestnut Street
Nashua, NH 03060
603.880.4420
FAX: 603.880.4536

CriticalProcess.com